CLINICAL INVESTIGATIONS

3431

CONJUNCTIVA IMMUNOPATHOLOGY IN PRIMARY SJOGRENS SYNDROME (1° S.S.)

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Aim: To evaluate the histological changes and immune response of conjuctiva in patients (pts) with 1° S.S.
Materials and Methods: We studied conjunctival biopsies from 15 pts with 1° S.S. and 2 normal controls using 1) paraffin section screening for the quality of conjunctival epithelium (CE), the number of goblet cells (GC) and the degree of inflammation, 2) Mo-abs and Pabs to: T-lymphocytes, T4, NK cells, B-lymphocytes, κ and λ light chain and MHC antigens class II (HLA DR) and I (br microgl), 3) frosen sections stained with Mo-ab to T8 and direct I.F. for detection of Ig's (IgA, IgM, IgM) and complement (C3, C1q, Cu) deposits.
Results: The thickness of CE was focally or diffusely diminished in 9/15 pts. Desquampition of the cells was found in 11/15 pts. Nine pts had a great reduction and 6 moderate reduction in number of GC. Two had normal numbers. Inflammation was severe in 2, moderate in 4, low in 2 and absent in 2 pts. A good correlation of findings between lip and conjuctiva biopses was observed in 8/10 pts. In 13 pts with inflammation, T cells predominated, T4:T8 ratio was about 2-3:1, NK cells were rare and plasma cells (found in 7/15 pts) were $\kappa^+ > \lambda^+$. In 4 cases uneven staining of CE for HLA-DR was found. Five cases showed mainly epithelial and 2 both CE and endothelial staining for br-micr. In 5/13 cases granular deposition of compl (C3 and/or C4) with Ig's (IgM/IgG) in capillary wall was found. Controls were negative.
Conclusion: In 1° S.S. 1) the predominant cell of the conjunctival inflammation is T-lymphocyte, 2) conjunctival epithelial cells may show increased expression of MHC class I and aberrant expression of class II and 3) capillary immune complex deposition can be also found.

3432

MICROBIOLOGICAL STUDY OF DAILY DOSE EYEDROPS AFTER 12 HOURS USE

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Purpose : The microbiological behaviour of a preservative-free daily dose after having been used for 12 hours was evaluated. The eyedrop solution was 2% sodium cromoglycate, a mast-cell stabilizer considered as a neutral medium for bacteria growth.

Method : 49 human volunteers received one drop three times in each eye for a 12-hour period. A slit-lamp exam was assessed at the beginning and at the end of the study, to verify the absence of irritation. And immediately afterwards, the remaining solution was cultured on solid medium, to favour the development of all bacterial species. After 24 to 48 hours of incubation at 35°C, colony counts were performed. A qualitative evaluation was carried out to identify the different bacterial species.

Results : Out of 49 samples analysed, 18% were germ-free. For the other samples with a positive culture, the degree of contamination was less than 10^3 Colony-Forming Units (CFU) / ml. The distribution was similar to the normal conjunctivitis flora. Neither *Streptococcus* nor *Pseudomonas aeruginosa* were found.

Conclusion : Most of the samples were characterized by a low degree of contamination with saprophyte bacteria. The preservative-free eyedrops would appear to be safe in a daily use.

3433

OXIDATING STRESS AND AGE-RELATED MACULAR DEGENERATION (ARMD)

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Purpose : The frequency, the severity (main cause of blindness) and the unknown etiology of ARMD led us to carry out a study in vivo on the role of oxidating stress in this disease.
Methods : Malonyl dyaldehyde (MD) assay in "affected" subjects compared with "control" subjects, both groups undergoing analyses in the same laboratory using the same technique - Assays of enzymatic and non enzymatic physiologic antioxidants.
Results : Comparing the assays of the control subjects and the affected subjects, the affected patients show a significant increase of MD and, far more surprising, an increase of some non enzymatic antioxidants.
Conclusions : Oxidating stress seems to play a basic part in the physiopathology of ARMD, but it is not necessarily linked to deficiencies in physiologic antioxidants.

3434

PERFORATING OCULAR TRAUMA WITHOUT INTRAOCULAR FOREIGN BODY : A PROGNOSTIC ANALYSIS

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Pupose To analyse initial clinical factors determining visual outcome of eyes after penetrating trauma without intraocular foreign body
Methods Four hundred twenty three cases of penetrating trauma were studied retrospectively. Factors including : wound location and length, mechanisms of injury, hyphema, lens status, retinal status, vitreous hemorrage were considered. All the pateints underwent initial surgery for corneal and/or scleral wound reparation and were treated intraveinouslly by pre- and postoperative antibiotiques.
Results Predominant etiology was sharp injuries in 25% of cases followed by blunt trauma 7.5%. Corneal implication was observed in 50% of cases. Initial complications concerned iris, lens and vitreous in 42%, 20% and 20% respectively. Final visual acuity was best correlated with wound length, blunt trauma, posteroir segment complications (retinal detachment, vitreous hemorrage).
Conclusion Factors correlating with excellent final visual acuity were anteroir wound location, sharp injuries, absence of hyphema or posterior segment involvement.